

Title (en)

NUCLEIC ACID NANOPARTICLES, PHARMACEUTICAL COMPOSITION COMPRISING SAME, DRUG COMPRISING DOXORUBICIN AND PREPARATION METHOD THEREFOR

Title (de)

NUKLEINSÄURENANOPARTIKEL, DIESE ENTHALTENDE PHARMAZEUTISCHE ZUSAMMENSETZUNG, ARZNEIMITTEL MIT DOXORUBICIN UND VERFAHREN ZU IHRER HERSTELLUNG

Title (fr)

NANOParticules d'acides nucléiques, composition pharmaceutique les comprenant, médicament comprenant de la doxorubicine, et procédé de préparation associé

Publication

EP 3821911 A4 20220309 (EN)

Application

EP 19833361 A 20190712

Priority

- CN 201810766003 A 20180712
- CN 201810765976 A 20180712
- CN 2019095766 W 20190712

Abstract (en)

[origin: EP3821911A1] Disclosed are nucleic acid nanoparticles, a pharmaceutical composition comprising the same, a drug comprising doxorubicin and a preparation method thereof. The nucleic acid nanoparticles have a nucleic acid structural domain, the nucleic acid structural domain includes a sequence a, a sequence b and a sequence c; the sequence a includes a sequence a1 or a sequence obtained by insertion, deletion or substitution of at least one base in the sequence a1, the sequence b includes a sequence b1 or a sequence obtained by insertion, deletion or substitution of at least one base in the sequence b1, and the sequence c includes a sequence d or a sequence obtained by insertion, deletion or substitution of at least one base in the sequence d. The nucleic acid nanoparticles are capable of, by means of including the three sequences described above or variant sequences thereof, not only self-assembling to form the nucleic acid structural domain, but also serving as a carrier. While served as the carrier, the nucleic acid nanoparticles are not only capable of loading and delivering nucleic acid drugs, but are also suitable for loading and delivering other biologically active substances such as chemical drugs.

IPC 8 full level

A61K 47/54 (2017.01); **A61K 31/713** (2006.01); **C12N 15/10** (2006.01); **C12N 15/11** (2006.01)

CPC (source: EP KR US)

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A61K 47/549 (2017.08 - EP KR US); **A61K 47/6929** (2017.08 - EP KR US); **A61K 48/0025** (2013.01 - KR); **A61P 35/00** (2018.01 - KR);
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C12N 2310/344 (2013.01 - EP); **C12N 2310/351** (2013.01 - EP); **C12N 2310/3519** (2013.01 - EP); **C12N 2320/32** (2013.01 - EP)

C-Set (source: EP)

1. **C12N 2310/322 + C12N 2310/3533**
2. **A61K 31/704 + A61K 2300/00**

Citation (search report)

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- [X] WO 2016145003 A1 20160915 - UNIV KENTUCKY RES FOUND [US]
- [X] WO 2017147557 A1 20170831 - UNIV OKLAHOMA [US], et al
- [E] EP 3851533 A1 20210721 - BAI YAO ZHI DA BEIJING NANOBIO TECH CO LTD [CN] & WO 2020078216 A1 20200423 - BAI YAO ZHI DA BEIJING NANOBIO TECH CO LTD [CN]
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- [XY] ZENG YUN ET AL: "Time-lapse live cell imaging to monitor doxorubicin release from DNA origami nanostructures", JOURNAL OF MATERIALS CHEMISTRY. B, vol. 6, no. 11, 21 March 2018 (2018-03-21), GB, pages 1605 - 1612, XP055881837, ISSN: 2050-750X, DOI: 10.1039/C7TB03223D
- [X] WU DANDAN ET AL: "DNA nanostructure-based drug delivery nanosystems in cancer therapy", INTERNATIONAL JOURNAL OF PHARMACEUTICS, vol. 533, no. 1, 18 September 2017 (2017-09-18), pages 169 - 178, XP085228334, ISSN: 0378-5173, DOI: 10.1016/J.IJPHARM.2017.09.032
- See also references of WO 2020011248A1

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TW 202005638 A 20200201; TW I743518 B 20211021; US 2022409742 A1 20221229; WO 2020011248 A1 20200116

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